DOCUMENT RESUME

ED 105 373 CS 001 671

AUTHOR Karnes, Lucia R.
TITLE Symptoms and Remediation of the Dyslexic Child.
PUB DATE Nov 74
NOTE 28p.; Paper presented at the World Congress on Dyslexia, November, 1974

EDRS PRICE MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS *Dyslexia; Elementary Education; *Language Handicaps; *Learning Difficulties; *Learning Disabilities; Reading Difficulty; Remedial Reading; Underachievers

ABSTRACT

Dyslexia is defined as a learning disability or a dysfunction in the psychological processes involved in using spoken or written language, including reading, writing, spelling, speaking, and/or mathematics. It does not include disorders due to mental retardation, visual, auditory or motor handicaps, emotional or physical problems. The author relates her own experiences in identifying and dealing with various forms of dyslexia at the Orton Reading Center at Salem College in North Carolina. (LL)

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SYMPTOMS AND REMEDIATION OF THE DYSLEXIC CHILD

Lecture Given by

Dr Lucia R. Karnes
(Associate Professor, Psychology and Education,
Salem College, North Carolina)

at

The Royal Institution, 21 Albemarle Street, London, W.1.

on

Monday, 13th January 1975

In the Chair: Mr Harry Prior (Merton Dyslexia Association)

THE CHAIRMAN: My Lord, Ladies and Gentlemen, it is my pleasure on behalf of the Merton Dyslexia Association to welcome you to the Royal Institution for this evening's lecture. The Royal Institution has existed in Albemarle Street for 125 years and has a tradition for scientific investigation coupled with the exposition and illustration of the latest researches in the lecture room. The twin objects of research and communication of the results to teachers and educational psychologists are very dear to the heart of anyone connected with dyslexia, and I can therefore think of no more fitting venue for our lecture this evening than this historic lecture theatre. I for one cannot enter it without thrilling to thethoughts of Michael Faraday demonstrating in this theatre the results of his research on electromagnetic induction which had such far-reaching effects. I think that tonight is a unique occasion in that I believe it is the first time that dyslexia has been the subject of a lecture here.

In a moment I shall ask Lord Radnor to introduce our speaker, but before I do so I would like to remind you that after the lecture Dr Karnes has kindly agreed to answer questions, so please give a little thought to your questions during the lecture so that when the time comes we need waste no time to getting on with the questions.

I would like to make one other announcement before the lecture, and that is that the North London Dyslexia Association would like me to announce two lectures. One of them is an important and interesting one which is on 27th January, a Monday, at the Sydney Webb College, and here two speakers from the ILEA are coming to talk about the facilities which they provide for children with special learning needs. That is 27th January at the Sydney Webb College. Another lecture by the North London Dyslexia Association is on 10th February, also at the Sydney Webb College, where the speaker is Professor Russell of the Academic Department of Psychiatry in the Royal Free Hospital; and also Mr Slade, a lecturer in clinical psychology. The title of that lecture is "Number Blindness: Clinical and Psychological Aspects."

We are now delighted to have with us this evening Lord Radnor, the Chairman of the British Dyslexia Association, and I will now call on him to introduce our speaker.

LORD RADNOR: Ladies and Gentlemen, I am going to be quite brief, and I thought I would start by saying that some of us present here tonight - because I have seen them - had the pleasure in November last of being welcomed and entertained and taught at the International Conference on Dyslexia in Rochester, Minnesota, U.S.A. It

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been to the main meetings and witnessed about 1,600 people who never questioned really whether dyslexia existed or not, would not have failed to have take some courage. Quite apart from the traditional American hospitality which was there in full measure, we learnt a great deal from our American friends. We benefited greatly from a very robust and interesting interchange of views.

Tonight in this very important place we are lucky enough to have amongst us one of those friends, Dr Lucia Karnes, who is going to speak to us on dyslexia. I have asked her whether she had got a title to her talk, but she knows so much about it that I will just leave it at that. I rather enjoy under-statement, and so I thought I would say that Dr Karnes is a person of some note in this field. I have a list of some of her attributes, if that is the right word. She is the Director for Special Education at Salem College in North Carolina; she is also Consultant for the Upwood Bound Project in Winston. I was thinking coming up here in the train that we have an affair in this country which is "Outward Bound" but it is something quite different. It takes place among the young on top of Snowdonia, and the therapy is the cure for frostbite and exposure and physical prostration. It is very good for the young, I believe! Dr Karnes is also a member of the Psychology Association of Medicine, and a Member of the Association of University Professors.

At this stage I must admit, when I was talking to Mrs Hornsby, the telephone went a little bit fuzzy, there is something very American here I do not understand, she oversights the whole thing of the Delta Cappta Gamma firm. I felt I should put that in so that she can tell me afterwards what it all means.

I must put in last that she is a very important person in the Orton Society, about which a lot of us know here, and for which we have the greatest admiration, and from whom we have taken a lot of courage and help.

It is, then, my pleasure to welcome Dr Lucia Karnes, and at the same time I think it would be right and proper that I thank the Merton Dyxlexia Association for bringing this friend among us and for inviting us all here as well.

DR LUCIA R. KARNES: My Lord, Mr Chairman, Ladies and Gentlemen, it is a real pleasure for me to be with you. I have had the privilege of working in this field as a protegee of Mrs Samuel T. Orton whose husband was one of the early pioneers in the field of language disability, as we call it, or specific language disability, or even in the medical world as Strephosymbolia. None of us have been able to spell that, so we have not really emphasised that particular term. But that is the term that is used for our girls and boys who have particular aptitudes but somehow do not succeed in the academic world. So I really am just passing on to you the many things I have learned from Mrs Orton who worked herself, as I say, with Dr Orton, who was in this field in the very early days in the 1920s.

It is a real pleasure for me to be here. I do not really want to go home. I am so fond of London. I was saying to Mrs Hornsby, and her husband, I came in 1949 or 1948 for my first visit, and it has not changed at all. At least the subways are the same, or the tubes are the same. I was thinking today as I road on the Central Line from Tottenham Court Road out in this direction, that these subway cars were so new looking the first time I was in them; now they just look well used. When I was back here in 1970, four or five years ago, I had all my children with me. They had not been on my

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and torn something down. But I think you have done a wonderful job fitting the new in with the empty spots that were there in 1948, and really have made it all fit together in a beautiful pattern.

So it is lots of fun for me to be back, and especially to be with you as colleagues, workers with children. We are in a very confused state, I hate to admit it, in the United States about the children with learning disabilities, and particularly using the term 'dyslexia'. I have just got around to the point in time that I can actually say I work with children with dyslexia and not sneak out of the back of the building if it is not a medical situation. Since I was introduced to this field in the area of medicine, and there it was well accepted, of course, because of Dr Orton's work and that of many people in the early days, we can use any term we want to - perhaps dyslexia - and can use it with great fervour really. I know how Lord Radnor felt when he said there were 1600 people there all agreeing that such a condition exists. We have gone through that. I worked for 24 years with these girls and boys, and there was no doubt in my mind that they existed because I could study them from the medical field, the assurances and the research, but somehow the medical world and the educational world did not join hands. Nor did the psychologists who often go between the two. It has only been in very recent years that we have been able to get out of maybe the private schools and the medical schools to get to the children in the public schools. That is where we need the help in the United States.

I mentioned to you the terms that are used throughout the United States for our children. They may be called dyslexic. They may have a specific language disability. They may have developmental learning disability. They may have minimum brain disfunction or minimum brain disorders. The medical world is using that now. They may have visual perception problems, neurological problems. There are many other terms. It just depends frankly in the United States in which State you live. In Texas the child has a specific learning disability. In California he is educationally handicapped. In Road Island he has a neurological problem. In North Carolina, where I come from, he just has a learning disability. We know though what the child is like and who he is, and no matter what the term is today the important thing is to teach the teachers about the children and for the children to have help as early, as soon and as much as possible.

The definition which has been adopted by our HEW - Health Education Welfare - after a two-year study in the United States goes something like this. They do not call it dyslexia. Actually, dyslexia is the best word to use in the United States because if we identify the child as having dyslexia it is a tax-deduction! So as often as possible I say - and I do not like to use terms, that business about labelling - your son has a specific learning disability, sometimes known as dyslexia. So if they want to take it off the income tax they may do so. Also, they are a little more up to date than their next-door neighbour because it is quite the vogue they say, in certain parts of North Carolina anyway, to be sure you have at least one child who has dyslexia.

The definition is one which most of us adhere to. I like it very much, because frankly a group of friends wrote it. You know that President Johnson's youngest daughter has this kind of problem. You know that you have to be in a high place to get anything done. Finally, somebody found out why she really only went three months to college and then got married. Everybody was worried about her getting married at 18, it was really more a matter of substituting something for college education, and she is the first one to admit it. But she

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Society for about twenty years, and they made up the definition so we like it well. This definition goes something like this: " a learning disability is a disfunction in the psychological processes involved in using spoken or written language." That is spoken or written language, it is not just reading. "These include reading, writing, spelling, speaking, and/or mathematics. They do not include disorders due to mental retardation, visual, auditory or motor handicaps, emotional or physical problems. "

Put very simply, this then identifies our children as having normal intelligence, good reception of stimuli, satisfactory emotional environments, and no real physiological problems. This, then, is in many educational situations an unknown quantity. For years and years the psychologists have said the reason a child does not read is because he is emotionally disturbed. For years you and I have said the reason a child does not do well in spelling is because he is not paying attention, he is too busy doing something else, he should study more. For years we have said this boy is not writing well, actually writing, the process of putting down in writing, because he is just plain sloppy, if he would take his time he could write well. If he would try harder he would write well. You know the little girl or boy who tries over and over again to tell you what he wants to say in sentences that are appropriate and proper and somehow never gets the right words out. He says "Give me the constructions, I want the constructions for this model aeroplan" instead of "the instructions". They just produce the word a little bit off from the expected vocabulary.

These children, then, are easily identifiable once we take this definition, once we realise that we have talents and gifts and that we have on the other hand perhaps disabilities or lack of talent in certain areas. I like to say to the parents with whom I have so many conferences that as far as aptitudes we have certain abilities that are very keen and very fine, and we may be very good in them. We may be fine in music. A child may be very able to pick up tunes and to sing or to play well, but he just is not good in using words. He just does not remember how a word is written when he has to write a theme or a story. He does not relate the words he speaks, and he has been talking ever since he was 9, 10 or 11 months old. He does not relate those words which he uses so well orally in speaking and in understanding with the symbols, with those funny little letters, the 26 letters that make up our alphabet, which in turn make up the words we speak. He does not have the ability to relate those words with the words that he uses so well as he communicates orally. Therefore, he lacks that talent. You do not have it or not have it. We have found through the years that children with dyslexia or with a language disability may have this kind of a problem to different degrees. In Georgia we say you may have a tet of it or a very bad case. We found some children who are in the fifth or sixth grade who cannot read, cannot write, cannot spell, and even have trouble in oral communication; in the fifth grade they are acting like first graders with normal intelligence. We have tested them. They have normal intelligence. On the other hand, we might find a child who is very bright, 130 or 140 I.Q. who reads very well, even reads rapidly, expresses herself beautifully in oral vocabulary, but the spelling is about fourth grade/fifth grade spelling. The handwriting is just so sloppy it never gets down on the paper as that theme should come out, and the teachers say he just does not write as well as he speaks, or if the child made oral reports we would really be able to evaluate her fairly.

There is one thing you do so much better than we do. In all of our research in psychology in the area of language in the United States

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There is one thing you do so much better than we do. In all of our research in psychology in the area of language in the United States we find that we are awfully good talkers, we are not sure what we are talking about sometimes but we are good talkers. But you are the good writers, and that is the most significant educational evaluation we have in our research, that English children do a great deal more writing

than American children who do a lot of talking. The writing part is hard on our dyslexic children so that when they hit a good hard prep. school at about the ninth or tenth grade, which is our high school, they are in trouble. Our dyslexic children have gone through programmes. I have had three girls who have gone through the academically talented programme in a very big system, and that means you have a very good measured I.Q., a good background and all the rest of this business, they have actually gone through the academically talented programme and hit a ninth grade English and history course, and a foreign language - French perhaps - and have folded completely to pieces and begun to fail across the board. When we test them we find that they had what we would say, a tad of dyslexia which was coming to the forefront for success in High School work which was more difficult than they had been required to do previously.

Well now, the theory of the aetiology or the causation of this is most interesting. If you are here as a psychologist I know you adore studying these children because you can predict this is going to happen, but until you have seen 150, 200 or 300they are always interesting, there are new sidelights, and you will get together for weeks and weeks and discuss why. Why? Well, the causation or the aetiology very honestly is quite fascinating, and yet I do think that it should be left to those who have the time and the energy to do that. Today the real need is to identify the children and to teach them. I like the research, but that is not where the need is now. The need is to find the children who we can find. It is just as obviously as for a doctor would be the difference between mumps and measles. We know this syndrome. We know how to find these children. Then the important thing is to teach them, to take them where they are and to teach them to read and write and spell at least to the level where they can succeed in school. Then we can if necessary in high school and college adjust some of the academic requirements. But, of course, the important thing is we do not let them drop out, we do not lose them when they get into high school, and we do not lose them even in college. We have much research and hypotheses about many of our famous geniuses of the past, and many people can point out to you people who have been great successes but could not write or spell, and had a very difficult time reading. So we do not want to lose these talented people because we do not identify them as having this kind of problem.

I know you have questions on aetiology, and I will be glad to answer what I can, but I am not a physician. The neurologists are working on it. Your Dr Macdonald Critchley, when he was in Rochester, said that after 25 years of our little Orton Society plugging away to do something for the children in the United States he hoped that at the golden anniversary that the medical world, and maybe the psychologists with them, would be able to explain why. But I think I will just leave that in your hands, and now work for the next 25 years myself in training teachers and helping parents and working with special education people.

If you will bear with me, let us be very practical. I am not really sure of the test that you have, that you use widely here, but I thought I would give to you very simply what I have been trained to do and what I do when a child comes in. We have a little centre and I have seen 175 children in the last year at this centre. I have a staff of young psychologists doing just what I say. I do not have any more mature, trained ones. I have got so pragmatic in this business now, I am old enough to say "Yes you do it your way and you do it your way, but we are going to do it my way here." At this point I have enough parents helping me out, and if people do not do it the way we think————! We do not know why it works. I do not know why in the world really the brain responds as it does to the tutoring which we do, but we do it, and it seems to work, and so I am not going to argue with it or try to substitute

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Well now, the theory of the aetiology or the causation of this is most interesting. If you are here as a psychologist I know you adore studying these children because you can predict this is going to happen, but until you have seen 150, 200 or 300they are always interesting, there are new sidelights, and you will get together for weeks and weeks and discuss why. Why? Well, the causation or the aetiology very honestly is quite fascinating, and yet I do think that it should be left to those who have the time and the energy to do that. Today the real need is to identify the children and to teach them. I like the research, but that is not where the need is now. The need is to find the children who we can find. It is just as obviously as for a doctor would be the difference between mumps and measles. We know this syndrome. We know how to find these children. Then the important thing is to teach them, to take them where they are and to teach them to read and write and spell at least to the level where they can succeed in school. Then we can if necessary in high school and college adjust some of the academic requirements. But, of course, the important thing is we do not let them drop out, we do not lose them when they get into high school, and we do not lose them even in college. We have much research and hypotheses about many of our famous geniuses of the past, and many people can point out to you people who have been great successes but could not write or spell, and had a very difficult time reading. So we do not want to lose these talented people because we do not identify them as having this kind of problem.

I know you have questions on aetiology, and I will be glad to answer what I can, but I am not a physician. The neurologists are working on it. Your Dr Macdonald Critchley, when he was in Rochester, said that after 25 years of our little Orton Society plugging away to do something for the children in the United States he hoped that at the golden anniversary that the medical world, and mybe the psychologists with them, would be able to explain why. But I think I will just leave that in your hands, and now work for the next 25 years myself in training teachers and helping parents and working with special education people.

If you will bear with me, let us be very practical. I am not really sure of the test that you have, that you use widely here, but I thought I would give to you very simply what I have been trained to do and what I do when a child comes in. We have a little centre and I have seen 175 children in the last year at this centre. I have a staff of young psychologists doing just what I say. I do not have any more mature, trained ones. I have got so pragmatic in this business now, I am old enough to say "Yes you do it your way and you do it your way, but we are going to do it my way here." At this point I have enough parents helping me out, and if people do not do it the way we think————! We do not know why it works. I do not know why in the world really the brain responds as it does to the tutoring which we do, but we do it, and it seems to work, and so I am not going to argue with it or try to substitute something else. Very honestly, there are lot of people arguing in the United States. This is the vogue, this learning disability, and we just go right on. We are not arguing, we are doing what we have been doing and trying to get to more teachers. So that I am speaking only from a

pragmatic point of view. I am only speaking from having taught children for 24 years, and I am teaching them the same way as Dr Orton suggested. He was a neurologist and a psychiatrist and was not a teacher, but using his fine theories of how one should learn many people in the education field went on and have taught children as he suggested.

So I thought I would just bring to you tonight in the most simple way what we look for as we differentiate these children from children who do not have dyslexia, and then I thought if we had time I would give you a little idea about remediation. This is the interesting kind of thing. We have courses. I do this for two years. You can take enough courses to fill up with a psychology major in your curriculum for two years. Or you can come for one year and take some courses; or you can come for summer schools and take two summer sessions; or you can come for one session of summer school; or you can take this little lecture tonight in two weeks; or you can take it in a weekend; or you can get together for a day, I do one-day seminars; or if I do not have much time I do have an afternoon with the P.T.A., or maybe in the morning we will have an hour and a half with the faculty of a school. Or sometimes I have a rotary, and then I have to be sure to get through in 43 minutes. We have more time than that tonight, so I will just chat a little about how we do identify the children. I do want to point out to you the characteristics that Dr Lloyd Thompson gave, which Mrs Orton gave to him, I think, but anyway it is in a very good book he has written and these are so familiar to you that I thought I would just read them over.

The first one is that a child has a reading achievement considerably below his mental age and/or years of schooling. Nearly always we get worried when they cannot read. That is the first thing that comes out. It does not always.

The second characteristic is that there is no evidence of significant impairment of vision, hearing, brain damage or primary personality deviation. This means that these children do not fit into any of the other categories of special education.

The third is, there is great difficulty in remembering whole word patterns and confusion of small words. If they would just read ton for not every time, we would teach them the other way. If they would always write 'was' for 'saw', we would say say 'was' is s-a-w. But they do not do it every time, so that this confusion occurs every once in a while.

There usually is poor oral reading and long-range spelling. Poor oral reading, I know you are going to say you do not ask sixth and seventh graders to read orally anyway. No, but compared to other sixth and seventh grade readers these children are very poor oral readers. The long-range spelling is terrible. When you have a child who is very bright, the mother always says, when I say "How does he do on spelling?" "Well, he does pretty well". "If we study it" - it is always 'we' - " he does well on his Friday lesson ." I say "How about the six weeks test?" - well, not as good on the six weeks. "What was that postcard like that he wrote you back from Cape?" - "Oh my goodness, he couldn't spell a word." This is what we mean by long-range spelling.

There are marked confusions in orientation of letters, b's, d's, p's, g's, sequences of letters, 'on' for 'no', 'felt' for 'left', and even reversal of numbers, 12 for 21, and then a 3 backwards or a 9 for a 6. These you have run into of course. The number 6 is usually some evidence of delayed or incomplete establishment of one-side motor preference - left hand, right eye; ambidextrous; right handed, left foot. We do not mention this until very late in any of our discussions, but I do not mind mentioning it to you because you are a group [illegible]

to have courses. I do this for two years. You can take enough courses to fill up with a psychology major in your curriculum for two years. Or you can come for one year and take some courses; or you can come for summer schools and take two summer sessions; or you can come for one session of summer school; or you can take this little lecture tonight in two weeks; or you can take it in a weekend; or you can get together for a day, I do one-day seminars; or if I do not have much time I do have an afternoon with the P.T.A., or maybe in the morning we will have an hour and a half with the faculty of a school. Or sometimes I have a rotary, and then I have to be sure to get through in 43 minutes. We have more time than that tonight, so I will just chat a little about how we do identify the children. I do want to point out to you the characteristics that Dr Lloyd Thompson gave, which Mrs Orton gave to him, I think, butanyway it is in a very good book he has written and these are so familiar to you that I thought I would just read them over.

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"Well, we don't believe in it, we don't think it has a thing to do with it, Dr Orton is absolutely wrong." But they all seem to do it. We have some ideas of why it is right, but I will not go into that.

Often the children have multi-sensory defects in language areas. That means imperfect speech, a little late with speech, poor oral vocabulary, and sometimes a clumsiness in handwriting. This is not always true. Sometimes there is left-handedness or language disorders in other members of the family. We have found this pretty obvious. Then, of course, three or four times as many boys as girls. We have so few girls. I had one therapist the other day say "I've had ten children in the last two years and a t last I've got a girl." We do not know, we have not linked it up with the sex link gene, and so forth yet. We have lots of theories, but for some reason the girls do not land up in the numbers that our boys do.

Those are the characteristics, the easy ones. Let us see what we do when we test the children. I have some overhead projections which you may like to see as a profile. Of course, the first thing we do is to give the children an individual oral intelligence test. I know you are about as low on psychologists as we are, but we have substituted some tests for the Wechsler that I recommend any good classroom teacher can do. Of course, the ones that we mostly use are any of the Wechsler, which would be the WISC, the WIPSI or the WAIS. These are the Wechsler intelligence scales. They are divided into interesting performance and performance aptitude. I have a grand time discussing the results of these, but with them if we cannot give those we give the Benet. We have some tests in the United States which run 15 minutes - the Slosson intelligence test - which any teacher can give. What we are trying to do is to find out if the child compares with the rest of the children of his age as a normal human being in his thinking. Therefore, we must give an individual oral aptitude test. We have lots of group intelligence tests, but they are pencil and paper and you penalise them immediately if they cannot read. We have to have an individual oral intelligence.

Then, of course, we just do the common-sense things to find out how they compare with this intelligence in the basic skills. Ifhave to admit, if you are a parent you are worried because your child is not able to read and write and spell well at school - not out in the playground, not at his grandmother's but at school. So this is an academic learning disability. I throw that word in, it is academic, it is in the school setting. You may say, and I may say, "Oh Billy, you're the best football player in the fourth grade. Billy, your pictures are better than any other boys in this classroom, you won the prize" and he goes back in the classroom and he cannot read and Bill says "There's something wrong with me". So this is the academic field we are talking about, and therefore we are going to test his academic basic skills.

So after we have his intelligence, then we test his silent reading. O.K., any good silent reading test, you have plenty of them and we do too. See if he is reading at grade level or if he is in the seventh grade and reading like a second grader, or if he is in the fourth grader and reading like a first grader, silently. All right, now if he is reading silently do you know what he is doing wrong? No, you do not if he is reading silently. So that the only way you can test and see what he is doing wrong is have him read orally. So after silent reading then we test his oral reading, and to test that oral reading then we have many different types of oral reading test. One that is used very widely in the United States now is a little test that was so poorly thought of by psychologists that it was left out of one

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read this out loud. This is a list of words. That is one kind of skill. Another kind of skill is being able to read paragraphs, is it not? You are not asked to read lists of words very often, except maybe at the grocery store or in the advertisements, or something, but you usually are asked to read paragraphs. So we have some tests that require you to read out loud paragraphs, and so one of the tests that we use is called Gray Oral. You have many of them, but they are paragraphs. Some of our children who know phonics, and maybe you are teaching children phonics here as we are in the United States, can figure out word lists, but once you get them reading in paragraphs they begin to put 'on' for 'no' and 'saw' for 'was', and so forth, and then our children begin to reverse and substitute, and then they leave off endings. We find that they are not reading adequately or accurately.

Then, of course, we have some other little lists of words. We have one little test which is not copyrighted, that is called the IOTA and that is a list of words that children often miss if they have dyslexia. These are words which, through research, we have found that children often miss if they have this visual perception problem. I have a list of words, everyone does. I made it up at the beauty parlour when my hair was drying. That is called the Karnes-Buncombe. I was going to call it Karnes-Dunkitt because there is a man called Dunkit who was fearless and intrepid and invited me to teach a course to the public school-teachers. He did not know what I was teaching, but some parents said, "Mr Dunkit, you don't have this up here" and they planned it and so I went. I was going to call it the Karnes-Dunkit test, and then I met Mrs Dunkit and I decided I had better not do that! So it is called Karnes-Buncombe, which is the name of a county way up in the mountain of North Carolina. People do not think it is very much, but it is a great big county. They keep inviting me back, so I like them very much. That is a list of words. There are lots of lists of words like this. But it is made up of regular words that are read phonetically. It is regular words. You know the English language is regular, 80% of the English language is phonetically regular. People have said you cannot teach anybody phonics in English because phonics is not regular. Eighty per cent is regular, and Mrs Sally Charles, who has come over here and has been with you all for quite a time, did some fine research and found that something like 95% of the words we actually use often our active vocabulary, are words that are regular. So we do turn to phonics to teach our children if they have not learned to read without it earlier.

After we have found they cannot read silently, then we evaluate what they are doing by having them read orally, and find these errors. Then we begin to say, "Ha, ha, you're having trouble with your basic skills of reading." Very honestly, some of our children won't have trouble there, but within our evaluation we throw in immediately a dictated spelling test so that in addition to evaluating the basic skills of reading then we are going to get the spelling because did we not say that a child with dyslexia may be a very poor speller? Spelling is necessary to get through any college I knew of. So that we give them dictated spelling words. We do not have them actually pick out the mis-spelled words out of four words, or which three words are correct out of these four, we dictate the spelling and that does not take a thing but a pencil and a plain piece of paper and a list of words. It is the cheapest test you can give. But from that test we see their recall, their memory for putting on paper the words which they are using in their spoken language. So a dictated spelling test is then given.

In addition to that, when we give a spelling test we also see the handwriting, do we not? Some of our little people [illegible]

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In addition to that, when we give a spelling test we also see the handwriting, do we not? Some of our little people are beautiful in handwriting, but the word is mis-spelled. They can make the letters but they are in the wrong place. Others cannot write a word. They literally erase and put it down again and erase and get it down, and have a terrible time with the process of handwriting. That is in addition

to the spelling. So this is a possibility of a problem, and it does come out, I hate to tell you, in sophomors in college. I had a boy last week drop out of college, a brilliant boy with a 145 measured I.Q. He wanted pre-med. We were doing everything possible to encourage him, and he called his mother and said "I can't get that last English term paper in, I cannot write it, I just can't write it." He came home, he is out of college now.

So this putting on paper, this writing, not just the spelling, but this boy said it took him days to write a theme. I told him he had so many good ideas, but "That doesn't make any difference, I can't put it on paper", he said. This, of course, is a type of dyslexia. It is a type of problem that is in the language area.

T herefore, that dictated spelling test gives us the handwriting, and then we have other things like the "Draw a person" which you psychologists are interested in, the Bender Gestalt test, and so on. From this we make up a little resume sheet. (Slide): This is just a little outline and nothing is copyrighted. If anybody wants to copy it, they are welcome to it. I am a teacher, I want to train teachers. There is nothing in the world that I want more than for people to help children. This is a resume of these little tests. They can be any test you have. These are the ones we are familiar with. This is the history of the child. Here are his Wechsler scores, and another test called the Peabody Picture Vocabulary Test. Then the WRAT, and with the WRAT we have reading, spelling and maths. Then we have a silent reading test, speech vocabulary, comprehension, then the IOTA which is a list of words, Gray's, Karnes-Buncombe, for the little children we have them say the alphabet, write it. We show them the alphabet and then have them tell us the names of the letters. Some of you psychologists will know the draw a man test, the Bender, the Slingerland - which is a very good test for identification made by Mrs Slingerland in the United States. Then we have the ITPA, which some of you may know - the Illinois Test of Psycholinguistic Ability. It tells you the same things this does. I had to put it down so that the psychologists would let me come to the meeting. I put ITPA, and they say "Do you do that?" and I say "Yes, when we have time."

Then we have tests for handedness. I do that because I see them writing, or I have them throw a ball. We test for eyedness by letting them look through a little kind of a scope or if I have nothing more, for children I roll up a piece of paper and getthem to look through this and see that tower, and do you know one eye is dominant? You focus with one eye, and the other eye comes round, and if you did not do that you would see two of everything. You do not want to see two of everybody. Some people you do not want to see one of, let alone two. We have footedness also. You have to start on one foot. You hop on one foot. We had a boy came out not long ago, and he was quite a fine athlete and a runner at his prep school. I said "How about hopping over to that yellow chair" and he said "Which foot?" and I said "Either foot, just hop". He was about 18. He said, "I don't know which foot to hop on." I said, "It's not that complicated, just hop" and he said "Oh you don't know how complicated it is, I am the best man on the track team, but I have just become that recently." I said "How did you do it recently?" "Well", he said, "The coach finally figured out that if he stood right by me when the gun went off and said "Right" I would start on my right foot and I would win every time, or he could say "Left" and I would start on my left. But if I have to think of which foot I always lose the race". Sure enough, he could use either foot, and I said "All right, do it on the right" and he hopped on his right foot over to the yellow chair, and I said "Come back on the left foot" and he really could use either foot. He had to have help to decide which one to start on to win the race. You have

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Just for fun I thought I would show you a little profile which we made up from this information. This kind of educational profile

gives you more understanding. I like to see pictures of things. I am still first grade. If I see the picture I get the meaning. I need it in addition to the auditory.

(Slide): Look at this, this is the kind of profile we make up. Here is a child in the fourth grade, the intelligence of a seventh grader. We give a maths computation test, and again it is interesting. Some are way down and some are at the expected level. Here are maths of 4.7, but when he got to silent reading it was third grade first month, and reading silently for comprehension first grade six month. Here the intelligence was that of a seventh grader. His father and mother were both veterinaries. He was thecutest little boy, but reading like a first grader. You can imagine the frustration. Now going up for oral reading, fourth grade fifth month. On another list of words, third grade fifth month. In paragraph form he was reading quite well, third grade nine month, and spelling second grade nine month. You see that. This is a typical profile.

(Slide): Here is another one that came in the other day. I said he was so typical we should make a slide on this, and here it is. He is in the fourth grade, of average intelligence, about 98. Maths, 3.9, but look at all of his reading and spelling ability, all down there in the first grade. He comes from a good home, a d octor's son. I have to say that because we call this the doctor's syndrome. We have more doctors' children than we have of any other profession. They can pronounce strephosymbolia, you see!

(Slide): This is one of the boys we have right now. He is sitting in the seventh grade at this point, his intelligence is about the tenth, and look at the ability. You do not do that here, I am sure, I am sure you do not do those social promotions because, after all, what could you do with a ninth grade boy if he is working in the second grade. You have to read three words to get second grade. We have children over and over again with this kind of a profile.

(Slide): This is the profile of one of the very bright children I saw not long ago who was failing in high school andnobody knew why. Here it is a girl, she is in the ninth grade, intelligence of the eleventh grade: maths, 6.3 and - this is the interesting thing - her reading comprehension. She is so bright that just by sheer stamina she gets the meaning. She reads slowly but she gets the meaning. She has a wonderful vocabulary herself, and so her reading is way up there. But when she reads for details she is reading about seventh grade, and when she has to write those themes in this private school she is going to she is just failing down the line. She is mis-spelling everything. I asked this girl what her problem was. She said "I don't have any trouble writing themes because I sit with the dictionary and it takes me a whole weekend to put my thoughts on paper for just a short composition to hand in on Monday, but they will not let me take the dictionary to my exams." She went on "I cannot write a history paragraph in an examination and spell the words correctly enough to pass." She has not passed. This is another one of those cases where you see how up and down it is. These are the young children, the young children that nobody finds. They keep saying, "Oh, she's just lazy, she'd do better if she took her time" and this, that and the other. These poor students are working themselves to death. I have several of these from a hard school, all studying very hard but failing.

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(Slide): Here is another one, way up and down. This one was not down on spelling, just on silent reading. She had to read something like twenty pages a night from one of the classics, an English book in her English course, and she told me she could only read about three, that she could not get through it. Yet she was able to spell; her spelling was not so poor.

(Slide): This is another one that is way down on maths and again on spelling; left-handed and right-eyed, and so forth.

Just for fun, let me show you one to show you what happens when they have the tutoring. This is the child whom you saw (slide): This is the beginning line, way down here, and then this is the progress up here. Finally we got him up to practically the grade placement where he was going on on his own. He worked about nine months. This was a very bright child. In fact, I think this is one of the first ones I showed you that was way down, and then he came on up. We keep this profile. Of course, like any teacher we are interested in children for life. We do not get rid of them in this business, either , because very honestly once we have got them to read, write and spell up to a satisfactory level - and I hate to tell you this if you are a parent - then different little aspects of the language disability occur we require that they go higher in more advanced academic work. So that our children come back to us. If we catch them in the third grade, they come back in Junior High, and we do some counselling and do a little restructuring and additional therapy. Then they come back ready for college, and we ;talk about what they should take in college.

Although I am not quite so old as Mrs Orton, I have one child who is a grandchild. One father and mother came in with a little boy about three months ago, and I tested the child. He was in the third grade and had been to a private school. The father was adament about the situation. He was just fighting within, and usually the fathers are not that mad. He was very angry. The mother was placid about the situation, and the father was going to get help. So I explained and explained, and he said "I had trouble in school" - I had a feeling that Daddy did - and he said "I never did get my maths". He did not say anything about reading. So I explained and went into the details of the kind of problem this cute little boy had. He was bright, 120 I.Q., just cute. Everything was in this child for them. I spent about an hour with them. Then my Secretary came in and said "You know, after the Mitchels left, Mr Mitchels' mother called." I said "Don't tell me I've got to tell the grandmother all about the situation, I just have not got time to tell her" and my Secretary said "She just wanted to tell you that you taught the little boy's father and he did not recognise you". I knew I had changed, but I did not think it was that bad. She said, "He did not recognise you, but the minute he called me I knew where he was taking his son and that the little boy has this kind of problem, I did not know whether he told you that you taught him and I thought you ought to know." So I have got grandchildren coming; I have been round that long.

We do take care of the children of our children, after our own children whom we see graduate from college.

So this then is the profile we work on, and we continue testing after certain lessons, and try to see the progress they have made. If they have not made progress, we try to do something about ourselves and try to help them by adjusting our therapy.

As for the tutoring or the teaching of the children, we are not terribly original. We feel there are two aspects to working with children. Perhaps the most important if at all possible is to work individually. I have just been to Brussels to the World Congress on learning disabilities. I heard it said so strongly that everybody should be taught individually. I am going now to

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time to figure that out, but anyway he said he did and found that the progress would be so much greater. The progress is greater on the one-to-one basis. If that is not possible, small groups or even whole classes, but we do believe in teaching the children the language, and that is the English language, first. But you know children in Germany have this problem; children in Czechoslovakia have this problem; it is also true in Spain, and all over the world. A language disability is not just because they are trying to learn English. It is a human disability, not a particular type of language. We believe in teaching them systematic sequential phonics. The reason I say that - systematic sequential phonics - is because they must have structure. Our little people need something to hold on to. If they only spell 80% of the word correctly, that is better than 20%. So we structure the language that they have to see, and then reproduce, as carefully as possible, and we do it through phonics. Of course, you know what phonics are. Phonics are nothing in the world but taking 26 letters and producing 45 sounds in the English language. As you know, we have 45 sounds. I only have 44 because I cannot say 'basket' like they do in Boston. That page I skip over. I am very fortunate, being from the South, that there are a lot of other sounds we do not use. So we have maybe 40 sounds. But if we spoke correctly we would have between 45 and 46 sounds, and the confusion is that we have just got 26 letters. So, you see, you have got to arrange those 26 letters to take care of 45 sounds. That is what phonics are. That is all it is, that arrangement.

We believe that the children need to be presented their written language according to basic systematic phonics. They should be presented in what we call a multi-sensory approach. You can argue with me if you want about teach from the strengths, teach from the weaknesses or teach from this, that, and the other. I have found that I do not have time to diagnose two or three or four or six or eight or ten months, to figure out whether they are strong in this or weak in that. Very honestly I can do it because I have been doing it so much, but I feel that a good psychologist knows that you just do not teach the strengths and hope the weaknesses will come up, or just teach the weaknesses and leave out the strong attributes that a person has. We have learned in much of our psychology that one aptitude reinforces another. So we believe very strongly in teaching the multi-sensory, that means when we present the child with a written word we say "Look at that word, that's cat. Say the word, write the word, turn the page over and write it from memory". Then you have actually used all the senses. You have seen it, you have said it, you have written cat, kinesthetics, and you have then tried to remember cat by writing it for long-range spelling. So it is just a multi-sensory approach using visual, auditory and kinesthetic as simultaneously as possible.

Then if a child is weak in one area, we bear down hard. If he cannot tell the difference between cad and cat, then we do an awful lot of work on the final consonents. If they are little children like we have, who say 'pin, pin, pin' for 'pin, pan, pen', then we have to do a lot of work on that middle vowel, and somehow hope they will put a pen in their hand instead of a pin in their hand to write with.

We in the south have quite a time with 'tin, tan, ten' and 'pin, pan, pen' and so forth, but we eventually communicate, and that is what we are working on.

This takes a great deal of structure. It takes much drill, and any smart parent - and I [illegible]

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This takes a great deal of structure. It takes much drill, and any smart parent - and I am saying it - or teacher can do it. There is no mystery about working with our children. Thereis no one way, and there is no one series of books. After you have worked with the children for about a year you write your own book, everybody does, andthat little group of teachers begin to use that book. We have lots of books sitting around, but anything that is systematic,

well organised, presents the English language to the child as he speaks it in written form, and multi-sensory, seems to work. Why it works I cannot say, but I do know it works. We find success. Sometimes some children go much faster than others. Sometimes our 140 I.Q.'s just do faster than our 100's and our 100's do better than the 90's. We do not take children below 90 measured intelligence, but honestly very occasionally I sneak a few in. I have got to go back and work on reports now. We have 65 children having tutoring at the centre. I saw 175 last year, and on the side I go round and see people at other places. So we have seen lots of children, but I do not let the reports go out without my seeing them because I see every parent. I never let a child come that I do not see the parents, I hope both parents but sometimes just one. I always give a written report. I think it is very unfair for psychologists to write beautiful reports, three pages long to other psychologists and never write a word to the parents. Even if the report is brief. I dictate at 5 a.m., or something like that, and it sounds like it. I still send a written report to the parents. I try to make those reports as simple as possible.

The hardest report I ever wrote was to a man's wife. A man came in at 32 years old. We tested him, and sure enough when he got to me he read in Gray's oral and could only read bearly second grade, could read a few words and could not read really second grade. We talked, and I said "Why are you worried?" First of all, why did he come? The ophthanologist had sent him. He said "Did he tell you what was wrong with me" and I said "What do you think's wrong?" and he said "I thought I was dumb until I was twelve years old but then I found out even though I could not read I could do a lot of things that the other children who could read couldn't do." I said "What do you do now?" He told me that he had a dairy farm with 89 head of cattle. Somebody said that was a good size dairy farm. I do not know much about it. He said they were doing very well. I asked him if he did not have to read anything to take care of the cattle but he had a little tape recorder which he carried round with him. There is a very small expensive one, $150, and he put it in his pocket and none of the men who worked for him knew that he could not read. He went round the farm dictating on to the little recorder, and he then went back to his wife who took off the messages he put on. I said "Well, you're just running the farm fine. You've got a grand business going, why are you worried?" He said "I've two little girls, and the first one is going to first grade this Fall and I have heard that this kind of reading problem might be inherited and I just want you to tell me that I'm bright enough, I'm smart enough, and I want you to tell me if because I cannot read my daughters are going to have this trouble." I said "Just don't worry, bring her right over to me and I will tell you if there is any kind of a problem and if there is any chance of it we will work with it." He had gone all this time not being able to read or write himself, or spell, with a very good business I found, but I had to write a report and I wrote it to his wife and I had to tell her, because she could read and she had to read the report to him about himself. So I guess that was about the hardest report I have ever written, but I sent a report to the family. I think all parents are due that.

Well, that is our business in a nutshell. The new frontiers are very interesting in this field. Of course, the most important thing is that all classroom teachers know about our children. I do not care how many psychologists know, how many international meetings we have, it is the classroom teachers who need to know. Usually it is the parents who find the children first. Secondly, I think the important thing which we are all working on is early identification, pick these children up. We can pick them up, 90% of the time, at the end of the Kindergarten, and pick them up without much question by

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Another area is these college material students, the very bright ones who are failing in high schools, not in jail. We have got

plenty of them in jail. Something like 80% of the first offenders in juvenile cases in our country cannot read. So we know a lot of them have a problem. But they are bad enough off, and of course we need to help them. But our college bound students from fine homes and good environments who are failing in high schools, we certainly need to catch them.

Then the area of mathematics is very important, and that is another whole field. It is related, and we are working on it. But we have not enough hard research in that field. I shall be very interested in the talk you are going to have on maths blindness in January, I am very interested in maths, the correlation between maths and spelling particularly we are working on.

I have enjoyed so much being with you. I have said so much, I am afraid, but I have certainly had a good time being here, and if you have some questions I shall be delighted to try and answer them.

THE CHAIRMAN: If that has not left everyone speechless, we have now got time for some questions.